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ABSTRACT

A research and development model--the Counselor Repertoire Development (CRD) System--in counselor education is proposed which would provide systematic procedures for providing trainees with a variety of empirically validated, appropriately sequenced learning experiences for the achievement of operationally defined performance objectives. The model reveals dynamic interaction among research, training, and evaluation components. The scope of the CRD System includes five discrete counseling styles each constituting a module of learning. Each style is subdivided into strategies which are implemented by operationally defined classes of counselor verbal responses and related discriminations. The proposed model, based upon an empirical functional analysis of the counseling task, allows questions heretofore extremely resistant to empirical investigation to become amenable to rigorously controlled research. (CK)

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AN INTEGRATED MODEL FOR COUNSELING RESEARCH, EDUCATION AND EVALUATION 1/

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February 5, 1970

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AN INTEGRATED MODEL FOR COUNSELING RESEARCH, EDUCATION AND EVALUATION

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The Problem

The development of verifiable and effective models and strategies for the education of new counselors and the professional improvement of practioners continues to pose a challenging problem to counselor educators and supervisors. Traditionally, counselor education programs have employed a three phase approach: (a) cognitive experiences such as lectures, readings and discussions in which trainees obtain an understanding of philosophies, theories, facilitating conditions, techniques, etc. thought to be needed for adequate counseling, (b) group activities and confrontations designed to increase the trainee's sensitivity of his affective responses in interpersonal interaction and (c) practicum experiences in which the trainee is thrust into interaction with real clients in the hope that generalization from knowing and feeling to doing will occur. As Delaney (1969) has observed, "The traditional counseling practicum is a 'hit and miss' affair with the supervisor hoping the counselor candidate has 'hit' all the experiences with clients necessary to help him develop the behaviors for good counseling, and hoping the student has 'missed' clients he could actually harm through incompetence p. 183 ." Arnold (1962) cryptically summed up the state of the art by asserting that counselor educators "simply do not know what they are doing or how to evaluate it p. 189 ."

A Proposed Research and Development Model

What appears to be needed in counselor education are systematic procedures for providing trainees with a variety of empirically validated, appropriately sequenced, learning experiences for the achievement of operationally defined performance objectives. Answers to questions such as those posed by Krumboltz and Thoresen (1968) are crucial to the development of such procedures:

> "1. What are the performance objectives in counselor education?
>
> 2. What experiences, in what sequence(s), will best (in terms of efficiency of resources and effectiveness) produce these performances?
>
> 3. What are the possible interactive factors (trainee characteristics, entering skills, client behavior and characteristics, environmental variables, etc.) which require differential training procedures?"

Answers to these questions, especially the first, must emerge from an empirically oriented model of the counseling task. Until recently efforts to conceptualize and define the counseling task

have focused on hypothetical constructs relating to embiguous assumptions concerning the counselor's responsibility in establishing a social-emotional climate within the counseling setting. Not only were these process variables vague but they defied objective measurement. Myriad attempts to evaluate counselor and trainee manifestations of such constructs as accurate empathy, positive regard, congruence, warmth, etc. have been made (Halkides, 1958; Barrett-Leonard, 1959; Strupp, 1960; Truax, 1961; Carkhuff and Truax, 1965a, 1965b; Truax and Carkhuff, 1965; Martin, Berenson and Carkhuff, 1966; Berenson, Carkhuff and Myrus, 1966; Gross and DeRidder, 1966; Holder, Carkhuff and Berenson, 1967; Vander Veen, 1967; Demos, 1967; Carkhuff and Alexik, 1967; Berenson, Mitchers and Moravec, 1968). All of these efforts, however, are characterized by at least two fatal inherent weaknesses: (a) the assumption is made that specific process variables are operating and then raters of similar persuasion are instructed in procedures for assessing them; and (b) although rater agreement is frequently high, serious questions must be raised concerning the contaminating effects of rater bias (Hackney, 1969) and self-fulfilling expectations (Rosenthal and Jacobsen, 1969). In 1967 Allen felt forced to conclude that "counseling is becoming a process in search of a consequence, a cause earnestly seeking an effect." The need in counseling is not more research but higher quality research characterized by (a) relevance, (b) disciplined inquiry, (c) new research models and (d) a systems orientation (Thoresen, 1969).

Performance Objectives

A recent review of counseling research (Hosford & Briskin, 1969) suggests that the profession may be "entering a period of new and creditable research with a consequent closing of the gap between relationship and behavioral therapy p. 187 ."

A growing body of evidence reveals that counselors, by means of their verbal repertoire within the counseling setting provide discriminative stimuli (Dulaney, 1961; Matarazzo, Saslow & Paries, 1961; and Skinner, 1957) and differential contingent reinforcement (Ball, 1953; Crowley, 1970; Krasner, 1958; Ince, 1968; Kennedy & Zimmer, 1968; Pepyne, 1968; Ryan & Krumboltz, 1964; Salzinger & Pisoni, 1960; and Waskow, 1962) which elicit, shape and maintain client verbal behavior. Verbal conditioning studies (Pepyne & Zimmer, 1969) social learning research (Bandura & Walters, 1963) and hypothesis generating factor analytic investigations of counselor-client verbal interactions (Zimmer & Park, 1967; Zimmer & Anderson, 1968; Zimmer, Wightman & McArthur, 1970) provide new theoretical models and suggest innovative applications to both the counseling process and the education of counselors who will engage in this process. Specifically verbal conditioning, social modeling and factor analytic paradigms separately and collectively provide promising vehicles for objective assessment of the counseling task and for bridging the gap between conflicting counseling orientations, between counseling theory and learning theory and between counseling theory and practice.

A Functional Analysis of the Counseling Task

Operating from a behavioral perspective, Strong (1964) contended that:

> ...the interview can be viewed as reciprocal verbal behavior usually between two people. The counselor talks then the counselee talks, then again the counselor, and so on. Generally, other behaviors, such as nodding, smiling, and looking are liberally added to the on-going interlocking verbal behavior (p. 660).

Within this frame of reference the effective counselor is conceptualized as one who (a) arranges stimulus conditions conducive to ideosyncratic client verbalizations, (b) differentially reinforces responses deemed appropriate within the counselor's theoretical orientation and (c) extinguishes (does not reinforce) responses deemed inappropriate to the enabling and terminal behavioral goals of the specific counseling relationship. The consequent modification of the content, style and modd of the client's behavior in the counseling session (enabling objectives) is assumed to generalize to other modes of behavior external to the counseling session (terminal objectives). The essence of this model of the counseling process if illustrated in simplified schematic form in Figure 1.

SCHEMATIC MODEL OF THE COUNSELING PROCESS

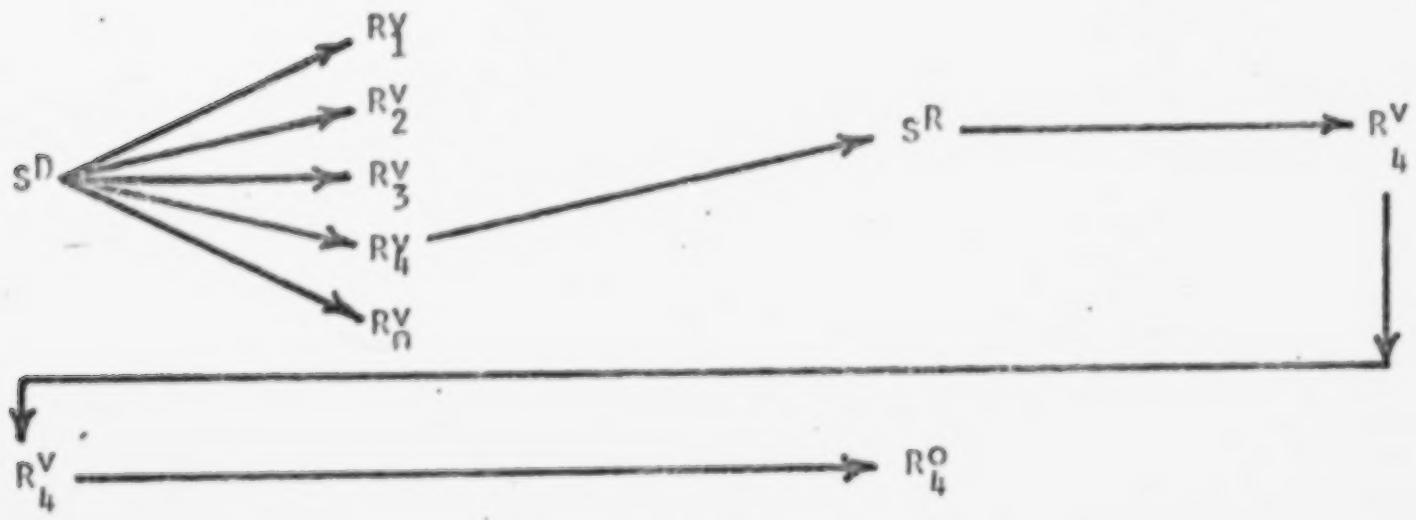

Figure 1

Figure 1. Counselor provides subtle discriminative stimuli (S^D) cueing the client as to the class of responses which will be reinforced. Client emits a variety of ideosyncratic response classes (R^V_1 ; R^V_2; ...R^V_n). Counselor reinforces the response class (R^V_4) deemed appropriate within the context of his theoretical persuasion but does not reinforce client responses (R^V_1; R^V_2; R^V_3; R^V_n) which are contrary to the counselors conception of movement toward enabling objectives. The differentially reinforced client response class (R^V_4) increases in frequency and is strengthened and shaped within the context of the counseling relationship (enabling objectives). Over time the client generalizes the selected verbal response class to behavior external to the counseling interview (terminal objectives.)

Skinner (1957) presented a verbal behavior paradigm with high utility for a functional analysis of the counseling task. Skinner suggested that each verbal response by a participant in a conversational dyad serves a dual function: (a) each response possesses reinforcing properties for the response it follows and (b) discriminative properties which influence responses which follow it. This paradigm illustrated in Figure 2 implies that the counseling process is a dynamic reciprocal interaction of counselor-client behavior.

VERBAL BEHAVIOR PARADIGM OF
COUNSELOR CLIENT INTERACTION

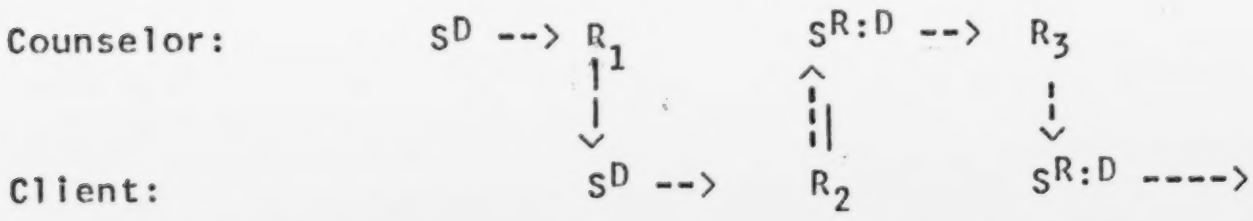

Figure 2. Each verbal response possesses both discriminative and reinforcing properties for the other participant.

Through the use of modern research technology such as high speed computers, audio and video recording equipment etc. it has becomepracticable to take samples of counselor-client verbal interactions and to systematically analyze so-called facilitating constructs and their inherent factor structures (Zimmer & Park, 1967; Zimmer & Anderson, 1968; Zimmer, Wightman & McArthur, 1970). This pioneering research by Zimmer and his colleagues has produced data by which previously unmanageable hypothetical constructs can be reduced to operationally definable linguistic criteria. Moreover, extensions of this factor analytic technique have produced evidence to dispell myths such as the contentions of Fiedler (1951) and Cartwright (1966) that what occurs in counseling is affected by the expertise of the counselor and characteristics of the client, not by the counselor's theoretical orientation or counseling style. Recently Zimmer and Pepyne (1970) provided evidence that significant differences existed in the manifest behavior of three expert counselors while each was counseling the same client. Also, these observed differences were directly related to the respective theoretical orientations of the counselors. In a related study Hakstian, Zimmer and Newby (1970) found that the same client responded and reacted differently on seven out of sever variables as a result of counseling with three expert therapists.

Counselor Education and Counseling Research

Through a continuing process of programmatic research (Zimmer, Pepyne, Hackney, & Crowley, 1969) it has become possible to identify and analyze at least five counseling styles. Within each style a variety of strategies have been identified. To date 31 discrete classes of counselor responses which implement these styles and strategies have been identified (Pepyne, Zimmer & Hackney, 1969). This functionally oriented program has provided a means for objectively analyzing the counseling task and has laid the foundation and implemented the development of a systems approach to counselor education known as the Counselor Repertoire Development

(CRD) System. The programmatic development of the CRD System has been progressing for the past three years in accordance with the curriculum development model illustrated in Figure 3. An inspection of this model reveals the dynamic interaction among research, training and evaluation components. Not only does research contribute to curriculum development but follow-up against task application continually suggests priorities for counseling research in the areas of task, trainee and client population variables.

Scope and Sequence of Training

The CRD System is based on a conceptualization of the counselor's task as (a) making fine grain discriminations of the client's current response hierarchy and (b) differentiating his behavior to selectively cue, reinforce and shape client behavior in the direction of enabling and terminal client-specific goals. Extrapolating from the analytical findings of Zimmer and his colleagues, the present scope of the developing CRD System includes five discrete counseling styles. See Table 1.

TABLE 1

MODULES OF THE CRD SYSTEM

Counseling Style	Prototype
Passive - Receptive	Carl Rogers
Active - Confronting	Frederick Perls
Rational - Analytic	Albert Ellis
Interpretive - Reconstructive	Franz Alexander
Active - Distributive	Edmund Williamson

Each style constitutes a module (unit of learning) in the CRD System. Each style is subdivided into therapeutic strategies. As an example, Table 2 lists the strategies included within the Passive-Receptive Style of Counseling. Finally each strategy is implemented by operationally defined classes of counselor verbal responses and related discriminations.

Instructional Model and Components

The basic instructional strategy of the CRD System places considerable responsibility on the trainee for the consequences of his learning activities. Figure 4 illustrates the interrelationships among instructional components in the CRD System.

In each module the trainee begins by obtaining a theoretical orientation to the target counseling style via selected texts and/or papers. Then, he is presented with a video-taped model of an experienced counselor employing the target style. Then, the

AN EMPIRICAL SYSTEMS APPROACH TO CURRICULUM DEVELOPMENT IN COUNSELOR EDUCATION

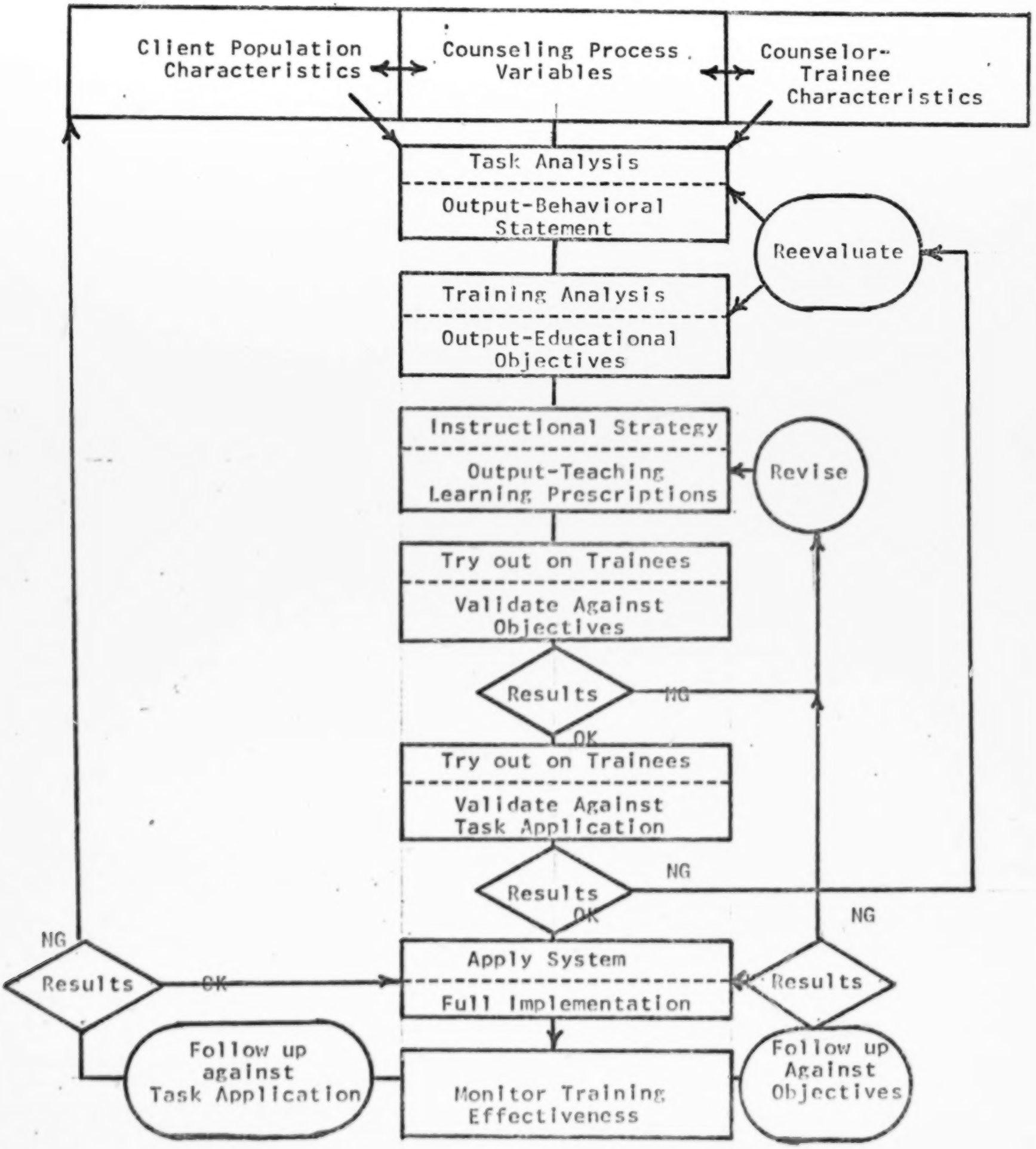

Figure 3

THE COUNSELOR REPERTOIRE DEVELOPMENT SYSTEM

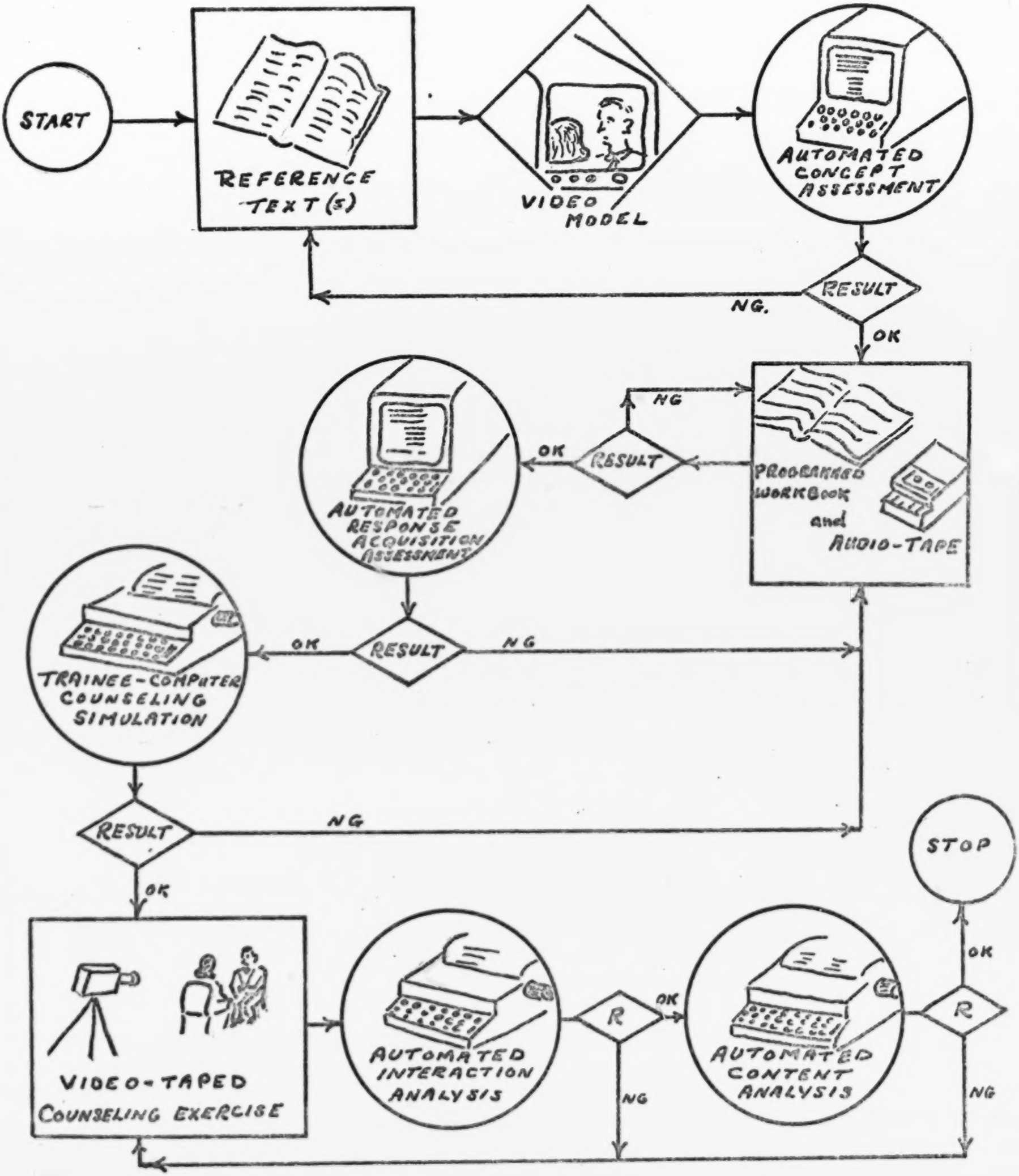

Figure 4. Interaction among module components

TABLE 2

THERAPEUTIC STRATEGIES INCLUDED IN THE
PASSIVE - RECEPTIVE STYLE OF COUNSELING

Sequences	Strategy
1	Initiating a Facilitating Relationship
2	Establishing an Ambiguous Set
3	Maintaining Client Verbal Responses
4	Shaping Client Verbal Responses
5	Communicating Empathic Understanding
6	Establishing Connections
7	Terminating an Interview
8	Terminating a Facilitative Relationship

trainee assesses his acquisition of the theoretical orientation through the use of a remote computer terminal and Program Self-Assessment (Pepyne, 1970). This program is a trainee-computer interactive testing program which administers, scores and files the results of tests on a large number of topical areas. From a variety of item pools (25 items each) the computer creates, by stratified random sampling, a great variety of confidence weighted, 5 item tests of equivalent form. A concurrent validity of .79 to .84 has been established between tests created by Program Self-Assessment and a criterion 50 item test of similar material.

If the trainee scores above a test-specific cut-off point he is directed to proceed to a programmed workbook dealing with the implementation of the counseling style, otherwise he is directed to review the reference text(s). In a fully developed module, the programmed workbook is supplemented by an audio or video-taped series of excerpts in which the trainee must discriminate the client response, produce an oral response and compare his response to a recorded model. After each set in the programmed workbook, the trainee is directed to continue if he has at least 90% response accuracy, otherwise he is directed to review the set.

Upon satisfactorily completing all sets in the programmed workbook, the trainee is directed to assess his response class acquisition by again using Program Self-Assessment. This time the test administered requires the trainee to identify, within the context of the target counseling style, the counselor response most appropriate for a given client statement. Again, the results of the assessment are reported and filed and the trainee is directed to continue or review specific sets in the programmed workbook.

In the trainee's sequential progress from theoretical orientation to accurate counseling task application, the next step is to assess his ability to discriminate client statements and create appropriate responses. This is accomplished through a

simulated social interaction computer program called Program Counseling Exercises (Pepyne, 1970). Here, the computer assumes the role of a disturbed client and responds differentially in terms of the trainee's accuracy in operating within the context of the given counseling style. Upon completion of the interactive computer exercise, a diagnostic assessment of the trainee's response class accuracy is presented. Successful interaction with Program Counseling Exercise directs the trainee to participate in a video-taped 10 minute counseling exercise with a volunteer subject; otherwise, he is directed to review specific sets in the programmed workbook.

After the video-tape of the counseling exercise has been prepared a computer program called, Program Interview Analysis (Pepyne, 1970) permits the supervisor, while observing the exercise with the trainee, to code each discrete client and trainee responses. At the conclusion of the exercise these paired codings are entered as data into the program and an interactive process analysis matrix with a diagnostic statistical summary is produced by the computer. At least two analytical variations are possible with this assessment procedure. By arranging a series of small buttons on the arms of the trainee's chair (Madaus, in progress; Stanton, in progress) and a series of small lights on the back of the client's chair, the trainee is enabled to signal the class number of the response he is planning to emit. By comparing the response class signalled with the response class emitted, it is possible to determine whether the trainee is emitting the response class he intends. A comparison of the supervisor generated matrix with the trainee tag matrix permits a differential diagnosis of trainee errors. The supervisor generated matrix compares responses required with responses emitted. The trainee tag matrix compares responses intended with responses emitted. Low percent accuracy on the supervisor matrix and high percent accuracy on the trainee tag matrix, for example, indicates errors in strategy rather than in response class construction.

In addition to presenting the supervisor with a video-tape of the counseling exercise the trainee also presents an uncoded[1] typescript of interview interaction. This typescript can be prepared in computer readable form on Novar magnetic tape cassettes, paper tapes or data cards. Program Interview Content Analysis (Pepyne, 1970) is used on remote terminals or Program Conanaly (Zimmer & Cowles, in progress) is used for batch mode processing. These programs provide linguistic analyses of the verbal content of a counseling interview. They have been designed as tools for evaluation and research relating to outcomes (enabling objectives) of counselor-client interaction. The programs allow for analysis of an interview in whole or in sequential segments. The increase

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1 Typescripts are uncoded except that pronoun referents are included in parentheses. eg. "I like my teacher but he (teacher) doesn't seem to like me."

or decrease in selected client-response classes can be sequentially analyzed. For example, increased use of self-reference responses, containing the pronouns "I", "we", "me", "us", "my" or "our" (Kennedy and Zimmer, 1968), positive affect responses, containing such key words as "love", "like", "happy", "joy" etc. (Crowley, 1970), deliberation or decision making responses (Ryan & Krumboltz, 1964) and other response classes have been suggested as viable enabling objectives of the counseling process. Program Interview Content Analysis and Program Conanaly provide tools to begin objective studies of what happens to client verbal behavior as a result of differences within and between varied counseling styles. Outputs from these programs also possess potential for use in a factor analytic approach to studying themes in interview content (Harway & Iker, 1966).

Implications of Proposed CRD Training Model

The proposed model, in accordance with the schematic representation in Figure 3, is based upon an empirical functional analysis of the counseling task. Task analyses, based upon the work of Zimmer and others, have been translated into observable, measurable performance objectives operationally stated as styles, strategies and related discriminations and response class constellations. Through a continuous progress program of instruction, proceding from theoretical orientation to task application, and criteria referenced Sequential Automated Monitoring of Counselor Repertoire Development (SAMOCORD), the model provides a dynamic interaction among basic research, training and evaluative activities. Questions, previously extremely resistant to empirical investigation, now become amenable to rigorously controlled research. Among the most pressing questions are these:

1. What functional relationship exists between a trainee's level of achievement of various instructional objectives and the effect of his counseling task performance on the movement of various clients toward specific enabling objectives. In other words, what is the relative validity of current notions concerning counselor education content and evaluation criteria for trainees, in terms of the effects of the trainees counseling task performance on the behavior of various clients?

2. What main effects or interactions exist among trainee characteristics and various instructional modes and sequences on the acquisition of various performance objectives? Answers to this question hold important implications for tailoring instructional prescriptions to trainee characteristics and for liberalizing or limiting admission requirements of counselor education programs.

3. What relationships exist among the accuracy of the trainee's counseling task performance and his effect on client interview behavior in terms of specific

enabling objectives? This question holds the potential of resolving controversies concerning the relative importance of process vs outcome evaluative criteria.

4. What are the effects and interactions of trainee characteristics, level of performance achievement, time since program completion and clinical setting on the counseling effectiveness of trainees after course completion. In other words, might it be possible to develop an empirically based formula for predicting trainee success in various clinical settings and, hence, more appropriately match the trainee with sources of practicum, internship and job placement.

5. What main effects and interactions exist among counselor response classes, non-verbal behavior and proxemic variables on selected classes of client responses? Answers to this question will undoubtedly suggest modifications in present educational objectives and instructional strategies. At this point in time only the semantic and syntactic characteristics of counselor verbal responses have been subjected to serious study. Even here, however, intonational, amplitude and cadence characteristics of counselor verbal responses deserve increased attention.

6. How do client characteristics and/or categories of enabling objectives influence the effectiveness of various counselor response classes, therapeutic strategies and counseling styles? Precise answers to this question have dramatic implications for the emergence of a dynamic eclecticism based on client needs rather than monolithic theoretical persuasion.

7. Can client responses be analyzed, classified and organized in order to facilitate trainee discrimination of current client response hierarchies and prediction of the relative ease of attaining specific enabling objectives with given clients. A viable answer to this question could shift the function of clinical judgement from a capricious art to statistically predictable process.

Other questions could be added to this list. However, those posed appear to be the logical next steps in a programmatic attempt to bring counseling and the training of those who will practice it under the aegis of an empirically based technology.

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